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ABSTRACT

The purpose of this handbook is to assist state, district, and school personnel in implementing the Assessment Component of the Foundation Program Assessment and Improvement System (FPAIS). The FPAIS is a comprehensive system for managing curriculum, intended to improve instruction for students. The Assessment Component includes the gathering and analysis of information for evaluation purposes. Assessments are conducted to determine the extent of student attainment of specified objectives, certify mastery of competencies, review the curriculum to determine whether intended learning is occurring, review instructional materials and approaches, and determine student readiness. Nine steps occur in planning any assessment: determine assessment needs, determine assessment parameters, obtain data collection instruments, determine data collection procedures, determine reporting requirements, determine data analysis procedures, determine data synthesis and presentation procedures, collect the data, and analyze the data. The appendix includes a listing of selected assessment resources. (Author/BW)

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Procedural Handbook for the ASSESSMENT COMPONENT of the Foundation Program Assessment and Improvement System (FPAIS)

Office of Instructional Services/Community and Support Services Branch
Department of Education • State of Hawaii • February 1981

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FOREWORD

The purpose of this handbook is to assist State, District, and School personnel in implementing the Assessment Component of the Foundation Program Assessment and Improvement System (FPAIS).

The Foundation Program Assessment and Improvement System is the Department of Education's comprehensive system for managing curriculum. It is based on the Foundation Program, which assists schools in carrying out the commitments of public education in Hawaii.

The primary intent of the Foundation Program Assessment and Improvement System is to improve instruction for students through systematic improvements in the Foundation Program. Assessments are implemented, coordinated and related to curriculum improvements by this curriculum management system.

The handbook is the result of a Department-wide effort. Many individuals from the State, District, School, University of Hawaii, professional and community sectors contributed substantial time and energies to its development.

The further refinement of this publication will proceed as an ongoing effort. Suggestions for improving it are welcomed.

Charles G. Clark
Superintendent

ACKNOWLEDGMENTS

This procedural handbook is one of two publications supporting the base document entitled *Foundation Program Assessment and Improvement System.*.

In developing this handbook, the Review and Dissemination Committee for the Foundation Program Assessment and Improvement System played a key developmental role. The members for the 1979-80 year, when the handbook was approved for publication, include the following:

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Along with the many individuals whose efforts have resulted in the creation of this procedural handbook, special gratitude for developmental services is extended to the following: members of the Office of Instructional Services Procedural Handbook Committee—Mr. Kenneth Yamamoto, Mr. Miles Muraoka, Mr. Thomas Hale, Mrs. Flora Takekawa, and Mrs. Nona Minami; Mr. Logan Kadomoto, Evaluation Specialist II, Planning and Evaluation Services Branch; Dr. Arthur R. King, Jr., Director, and Dr. Francis Pottenger, Professor, Curriculum Research and Development Group; and Mr. Stanley I. Koki, Educational Specialist II, FPAIS, Development and Continuing Education Branch.

TABLE OF CONTENTS

Page

Foreword iii

Acknowledgments iv

1. Introduction 1
2. Assessment Strategy 3
3. Organizing for an Assessment 6
4. Assessment Cycle Checklist 7
5. Assessment Responsibilities 12

Appendix

Resources on Assessment 20

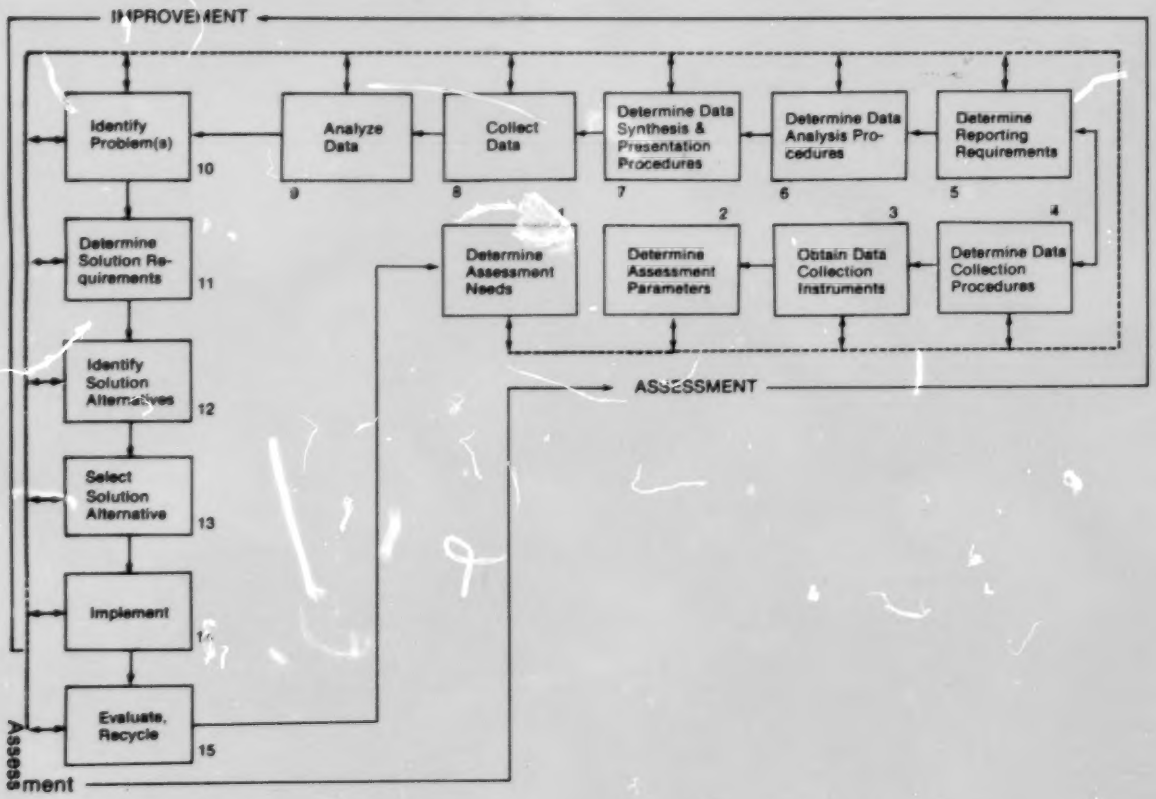
Summary of Publications on Assessment 28

1. INTRODUCTION

As described in the base document, *The Foundation Program Assessment and Improvement System* (FPAIS), the system consists of an Assessment Component and an Improvement Component. The Assessment Component employs a range of testing and non-testing procedures, with emphasis on curriculum review and analysis.

The flow of activities and relationship between the Assessment Component and Improvement Component is depicted in the figure below.

Figure 1. Relationship Between the Assessment and Improvement Components



The Foundation Program Assessment and Improvement System defines assessment broadly as the gathering and analysis of information for evaluative purposes. Through assessment, needs are determined and related to planning for curriculum improvement.

Within the Hawaii State Department of Education, assessments are conducted for a variety of purposes. These include determining the extent of student attainment of specified objectives, certifying mastery of competencies, reviewing the curriculum to determine whether intended learning is occurring, reviewing instructional materials and approaches, and determining student readiness.

This handbook specifies procedures appropriate for carrying out assessments in the Department. In education, as in every other field of work, the quality of decisions made is dependent upon adequate data. For this reason, the strengthening of assessment efforts is a vital concern at every level of the Department.

2. THE ASSESSMENT STRATEGY

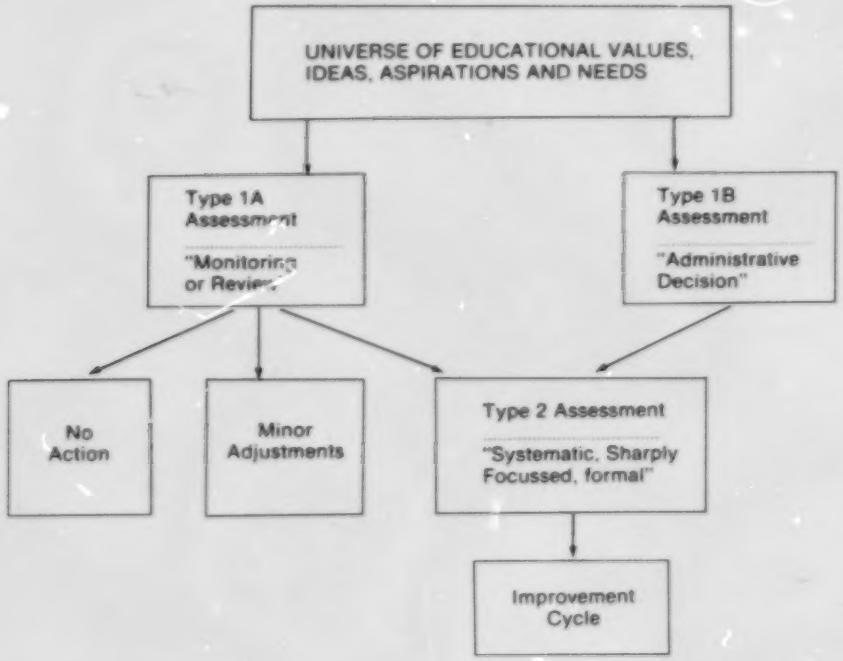
Education in a dynamic society is similarly dynamic. Changing social currents, new populations, new economic and career opportunities, and the increasing aspirations of parents for their children guarantee that education must and will change.

Changes in education derive from many sources. Some changes cannot be predicted, since they come from governmental, legal, political, and educational events which cannot be known in advance. Other changes in education can be identified by professional monitoring of the educational scene, working with such constituencies as labor, business, government, higher education, and other community groups. Regardless of the source of change, however, a thorough analysis of the issues, problems, difficulties, or visions of a preferred future is essential. When the assessment process is completed, the improvement process--the "I" of FPAIS--- can proceed.

The assessment strategy consists of those procedures specified in the assessment component for gathering information and measuring achievement of objectives and competencies for the purpose of assessing needs for program improvement.

Two types of assessment are represented in this strategy (see Figure 2). The first pertains to the initial identification of possible needs, and is represented by two methods. The first method, and the preferred one, is *continual monitoring and review* by an individual or organized work group (Type 1A). The second is the initial identification of need for improvement by administrative decision (Type 1B). Following this, when need for further assessment is indicated, Type 2 assessment is recommended, in which a more thorough inquiry is made.

Figure 2. The Assessment Strategy



Type 1A Assessment

Type 1A Assessment activities are those which are continuing in nature, either periodic or cyclical. Commonly called "monitoring" or "review," they are initiated on the assumption that educational programs are often in need of improvement. It is also assumed that data are readily available and can be organized and analyzed with a modest effort and that issues judged important will be studied in greater depth in Type 2 Assessment.

Example of Type 1A Assessment activities include the following:

a. Study of basic data: (1) achievement test data, enrollment in subjects and courses, grades given in various courses, and other evidence of student success or failure; (2) data on organizational climate; (3) staff data; (4) community data.

b. Follow-up studies of graduates.

c. School self-studies (including School Accreditation).

d. Cursory review of contemporary trends, issues, criticisms, and reports of simple analysis.

e. A review of treatment of thematic and special purpose areas of the Foundation Program in appropriate subject areas.

The type 1A Assessment will result in one of three recommendations:

a. The area assessed requires no change.

b. The area assessed requires minor changes of direction, emphasis, or resources.

c. The area assessed requires a systematic and thorough Type 2 Assessment.

Recommendations are made to the Assistant Superintendent, District Superintendent, or Principal, whichever is appropriate. After consultation with advisory bodies such as the FPAIS Review and Dissemination Committee, a decision is made on the appropriate action to take.

Type IB Assessment (Administrative Decision)

There are occasions when an administrator recommends the immediate commencement of Type 2 Assessment without going through Type 1A procedures. This happens when sufficient evidence indicates that a problem exists. For example, a new law is passed; a legislated state or federal program becomes available; a court or administrative decision requires a definite response.

Type 2 Assessment

Type 2 Assessments are systematic, sharply focussed, and formal. They include rigorous consideration and testing of hypotheses which attempt to explain the difficulties. They offer possible alternative explanations and provide a thorough analysis which gives guidance on the nature of the improvement effort required. Examples of activities which might require Type 2 Assessment include:

a. Conducting research into conditions at the school, district, state or national levels, including comparative conditions and results between schools, between districts, and between local and national school systems.

b. Analyzing available research, theory, and other documented information.

c. Designing and administering special test and non-test instruments and analyzing the data.

d. Soliciting a range of views and opinions.

e. Analyzing present and available program improvement approaches.

f. Others.

Type 2 Assessment normally generates the recommendation to use the assessment results as a basis for activating the improvement cycle. However, there will be occasions when an alternative recommendation may be more appropriate, such as deferring action until a later date because of other pressing events; intensifying existing efforts; or combining action on several problematic situations into one improvement effort.

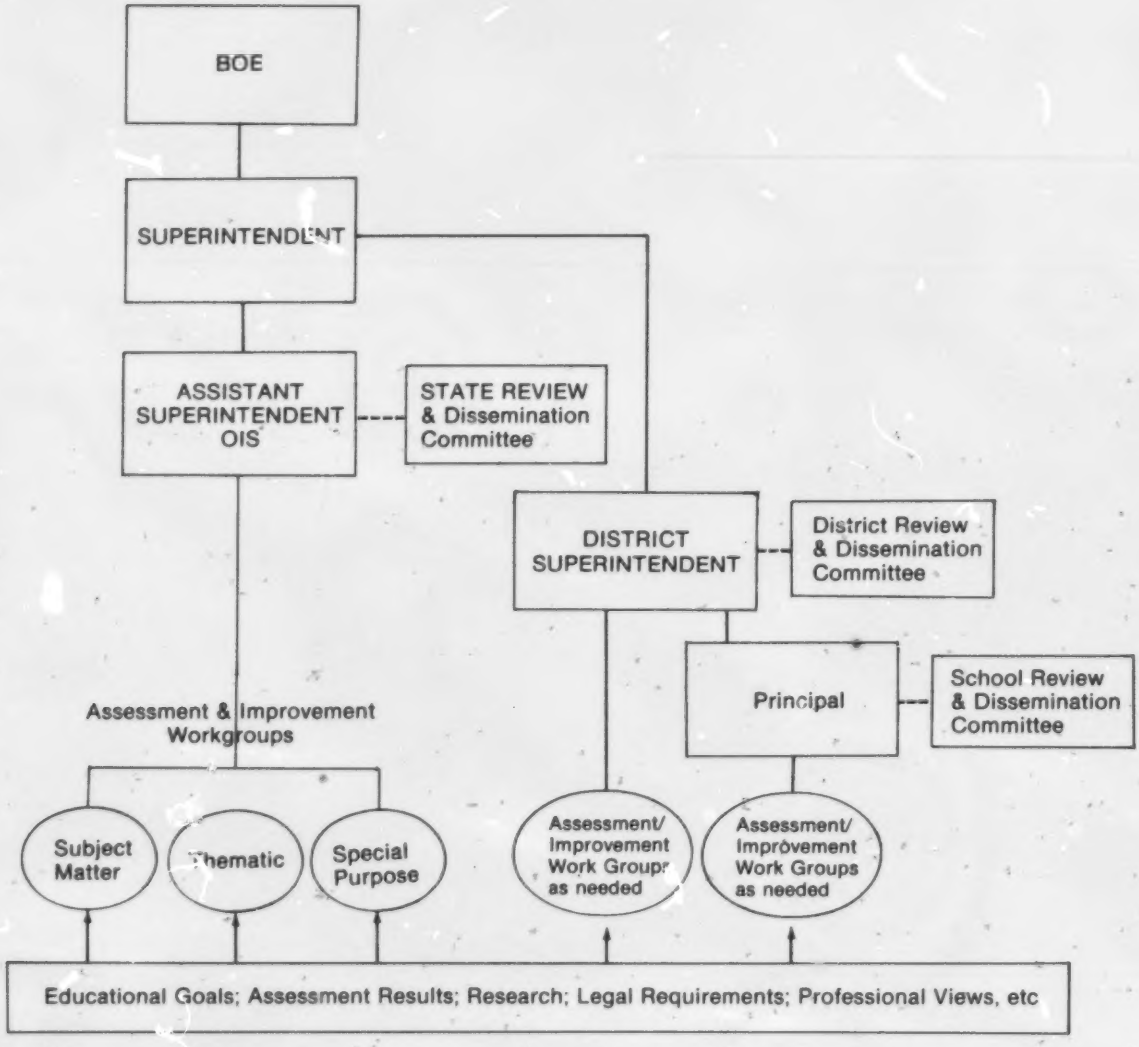
3. ORGANIZING FOR AN ASSESSMENT

There are numerous ways of organizing for an assessment. These will differ from situation to situation and will be dependent on local conditions.

The improvement handbook suggests procedures and a structure of work groups for identifying improvement strategies. Because the assessment and improvement cycles make up a larger, continuous cycle, in many cases it may be desirable to use the same committee or work group to plan both assessment and improvement. This committee should include in its composition individuals who are knowledgeable about assessment. As planning progresses and needs are determined, additional staff may be added as appropriate.

The following structure of decision-making, review, advisory work groups is suggested.

Figure 3. Organizational Structure for the Foundation Program Assessment and Improvement System



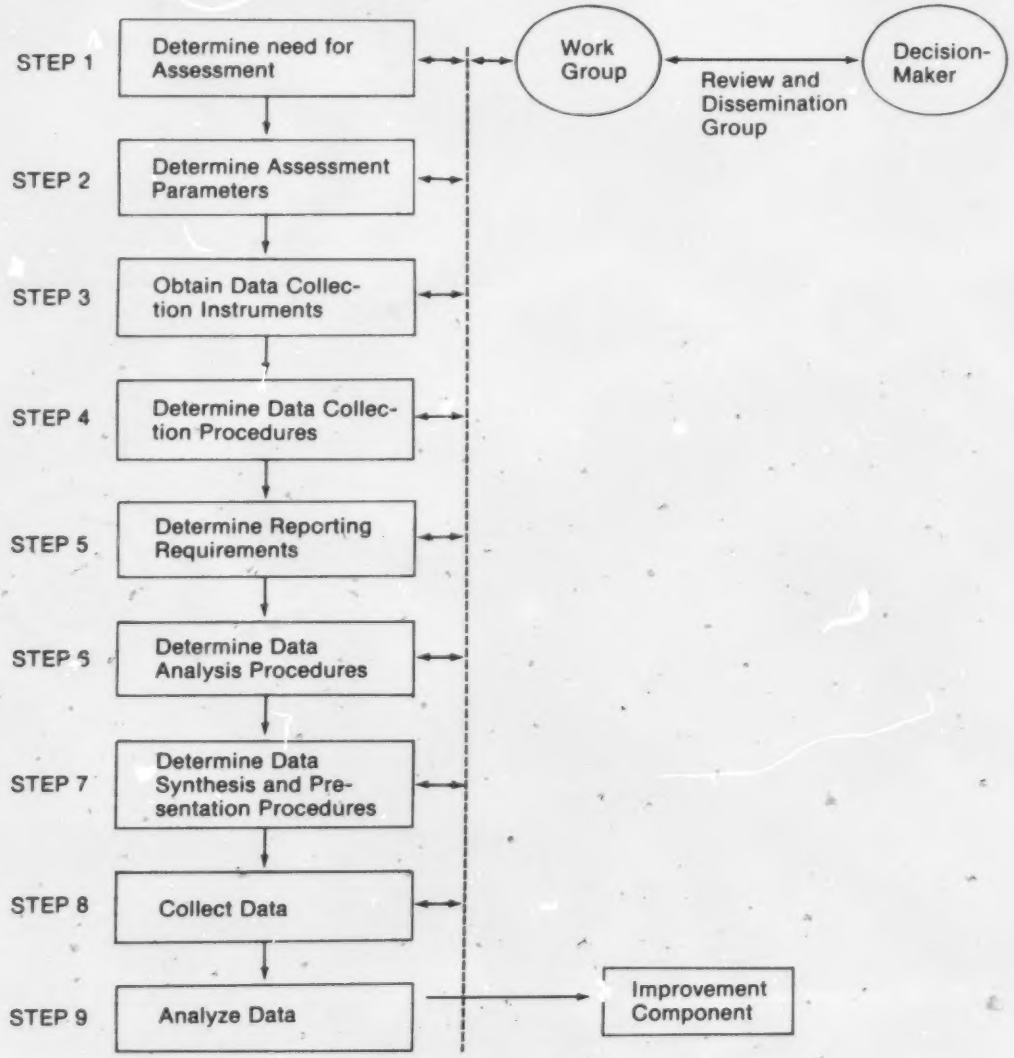
4. ASSESSMENT CYCLE CHECKLIST

The Assessment Cycle Checklist which follows has been developed as a general guide for Type 2 Assessment of educational programs and services. The checklist may be used before or during an assessment as a means of assuring that all major steps are considered. For Type 1 Assessments, use of the checklist requires selective modifications or adjustments according to need.

The checklist is based on the nine steps of the Assessment Component of the Foundation Program Assessment and Improvement System (see Figure 4). There are two lines of logic. The first (indicated by the heavy line) is linear and sequential. The second (indicated by the dotted line) is non-sequential, allowing selective consideration and ordering of assessment activities.

The conduct of the assessment is assigned to a work group which is immediately responsible to a decision-maker.

Figure 4. Assessment Steps



Step 1: Determine Assessment Needs

There must be a need or purpose to undertake an assessment. The ultimate test of the usefulness of an assessment rests on whether or not educational decision-makers (legislators, State Superintendent, principals, teachers and others) do study assessment results and make some decisions or take actions that are related to insights gained from the information gathered. Thus, to give the assessment effort credibility, the manager must set goals for the assessment, develop a rationale for initiating the assessment, identify the specific objectives against which the programs or service is to be assessed, and identify program information requirements necessary for decision-making.

Questions	Applicable	Non-Applicable
1. What is the reason or purpose for the assessment?	☐	☐
2. What questions are being asked?	☐	☐
3. What groups will make decisions and what kinds of decisions will be made as a result of the assessment?	☐	☐
4. What information is needed by the decision-makers?	☐	☐
a. What educational element(s) is/are to be assessed: learner, teacher, program, organization, facilities, services?	☐	☐
b. What are the stated purposes, objectives, functions of the element(s) being assessed?	☐	☐
c. What standard is to be used in making the assessment of the elements?	☐	☐
d. How adequate are the state purposes, objectives, functions of the elements in relation to the standard?	☐	☐
5. What information is already available? Has similar information been gathered before and by whom?	☐	☐

Step 2: Determine Assessment Parameters

A realistic assessment activity is manageable in scope. It can be successfully implemented within the constraints of established priorities, available resources, and available time. In order to determine the scope of an assessment, it is necessary to consider the specific areas to be assessed; target groups; resources available; and the time needed to conduct the assessment.

Questions	Applicable	Non-Applicable
1. What testing information should be collected?	☐	☐
2. What non-testing information should be collected?	☐	☐
3. What target group(s) should be considered in the assessment?	☐	☐
4. What resources are available (including money, personnel, facilities, time)?	☐	☐
5. What is the timeline of the activities?	☐	☐
6. Are events coordinated?	☐	☐

7. What are the special requirements of other persons or agencies involved in the assessment? ☐ ☐
8. Have the needs of multi-purpose assessment been clearly analyzed? ☐ ☐
   a. Are all informational needs of the same priority? ☐ ☐
   b. Are the informational needs compatible? ☐ ☐

Step 3: Obtain Data Collection Instruments

Assessment data can be collected in many different ways. In choosing a technique, four factors should be considered. First, the method should be agreeable to critical groups involved. Second, the information collection techniques should be technically sound and the data collected from them should be reliable, valid, and targeted to the objectives of the assessment. Third, the information collection techniques should provide the best data the assessment budget can afford, which means deciding such things as whether to buy or develop instruments or whether to use more than one technique for each assessment objective. Fourth, the methods should allow enough time for gathering and analyzing the data.

Questions	Applicable	Non-Applicable
1. What standardized tests exist to carry out the assessment of each objective?	☐	☐
2. What special instruments are needed?	☐	☐
3. Have appropriate instruments to measure each objective been identified?	☐	☐
4. Has adequate time been allocated to develop, field-test and revise specially produced instruments?	☐	☐
5. What techniques are to be used which are:	☐	☐
a. appropriate to the target population?	☐	☐
b. acceptable to the various levels in the decision chain (school, district, state)?	☐	☐

Step 4: Determine Data Collection Procedures

Determining data collection procedures consists of establishing plans and procedures for obtaining data from testing/non-testing activities. It also includes procedures for scoring, editing, and training personnel involved in the data collection activities.

Questions	Applicable	Non-Applicable
1. What is the plan for gathering existing data?	☐	☐
2. What is the plan for gathering new data?	☐	☐
a. What sampling plan is to be used, including sampling techniques appropriate to the assessment?	☐	☐
b. What procedures must be carried out in the administration of data collection activities?	☐	☐

1) Who will carry out the data collection? ☐ ☐

2) Has sufficient time been allocated for data collection activities? ☐ ☐

3) Has special inservice training needs of staff for data collection been met? ☐ ☐

4) Has scheduling been done and communicated to all parties affected? ☐ ☐

3. What scoring procedures are to be used (machine, manual, other)? ☐ ☐

Step 5: Determine Reporting Requirements

Determining reporting requirements refers to identifying the recipients of the assessment report, the specific information required, and the strategies and media format to be used.

Questions	Applicable	Non-Applicable
1. What will be the content of the report(s)?	☐	☐
2. Who will receive the assessment report(s)?	☐	☐
3. What will be the format of the report(s) for the various audiences (full report, summary, oral, other)?	☐	☐
4. What are the reporting dates?	☐	☐

Step 6: Determine Data Analysis Procedures

Data analysis is the process of organizing raw data to obtain useful information. Techniques for analyzing data may range from simple rank ordering of scores to very complex statistical treatments. Prior to conducting an assessment, an analytic methodology or set of procedures for analyzing and interpreting the data collected should be established. These procedures should be appropriate to the purpose of data collection and kinds of data collected.

Questions	Applicable	Non-Applicable
1. What are the procedures for data analysis?	☐	☐
a. What are the objectives of the assessment identified in Step 1?	☐	☐
b. What are the information needed by decision-makers identified in Step 1?	☐	☐
c. How will the data be arrayed?		
1) to show the relationship of assessment information to the objectives?	☐	☐
2) to facilitate analysis?	☐	☐
3) to present the data validly, concisely, and clearly?	☐	☐
d. How will the data be treated?	☐	☐
2. How will the procedures for data analysis be implemented?	☐	☐
a. Who will do the analysis?	☐	☐

b. What technical assistance or consultation service is needed, available, and will be used? ☐ ☐

c. What is the timeline for data analysis? ☐ ☐

Step 7: Determine Data Sysnthesis and Presentation Procedures

Determining data synthesis and presentation procedures includes deciding on the content of the assessment report, the data comparisons, and the display format, such as graphs and tables, appropriate for reporting on the data collected.

Questions	Applicable	Non-Applicable
1. What data synthesis and presentation procedures will be used?	☐	☐
a. What comparisons will be made?	☐	☐
b. What data displays will be used?	☐	☐
2. What form will the presentation take to most clearly answer the questions asked by decision-makers?	☐	☐

Step 8: Collect the Data

This step consists of carrying out the plans arrived at in Step 3 and Step 4.

Step 9: Analyze the Data

This step consists of carrying out the reporting, data analysis, data synthesis and presentation procedures identified in Step 5, Step 6 and Step 7.

Questions	Applicable	Non-Applicable
1. Has the data analysis plan been carried out?	☐	☐
2. Have the data synthesis and presentation procedures been carried out?	☐	☐
3. Have all reporting requirements been carried out?	☐	☐

5. ASSESSMENT RESPONSIBILITIES

The charts which follow identify the responsibilities of the state, district and school during an assessment. These responsibilities have been determined from the perspective of the source of initiative for the assessment (state, district, or school). Because the responsibilities of each level change both qualitatively and quantitively according to whichever level initiates the assessment, separate charts are provided. It should be noted, however, that regardless of the initiative for the assessment, the involvement of the various levels is essential.

These charts are organized according to major work phases for each step of the Assessment Component, and responsibilities have been keyed to these work phases. It is recognized that in particular cases some of the work phases may not require that full attention be given to them, or may be omitted. When this occurs, a corresponding modification or deletion of the responsibilities is appropriate.

ASSESSMENT RESPONSIBILITY CHART: STATE-INITIATED ASSESSMENT

Assessment Steps	Work Phases	Duties and Responsibilities		
		STATE	District	School
1. DETERMINATION OF NEED FOR ASSESSMENT	Development of rationale for the assessment.	Assume responsibility for development of rationale.		
	Determination of objectives and decision requirements.	Obtain input or consult with district, school and other appropriate individuals or groups.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
2. DETERMINATION OF ASSESSMENT PARAMETERS	Identification of areas to be assessed.	Assume responsibility for determining assessment parameters.		
	Determination of target groups.	Obtain input or consult with district, school and other appropriate individuals or groups.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
	Identification of available resources in relation to assessment objectives.			
	Establishment of assessment timeline.			
3. OBTAINING DATA COLLECTION INSTRUMENTS	Determination of assessment instruments needed.	Carry out review and selection process.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
	Examination of available assessment instruments.			
	Development of appropriate assessment instruments.	Make necessary arrangements for development process. Arrange for district and state assistance as needed.	Provide district input and assistance and arrange for school involvement as needed in test development process, e.g., field testing, review of manuals and guidelines.	Provide school input and assistance as appropriate. Participate as testing site as needed.
	Establishment of assessment timeline.			

Assessment Steps	Work Phases	Duties and Responsibilities		
		STATE	District	School
4. DETERMINATION OF DATA COLLECTION PROCEDURES	Development of data collection plan for existing data.	Assume responsibility for development of plans.		
	Development of plan for gathering new data: • Sampling plan and techniques to be used. • Data collection administration procedures.	Obtain input or consult with district, school and other appropriate individuals or groups.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
	Determination of scoring procedures.			
	Development of plan for data processing.			
5. DETERMINATION OF REPORTING REQUIREMENTS	Determination of content of assessment report(s)	Assume responsibility for determining reporting requirements.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
	Determination of who is to receive assessment report(s).			
	Determination of how the information will be reported (strategies and format).			
	Establishment of reporting timeline.			
6. DETERMINATION OF DATA ANALYSIS PROCEDURES	Development of data analysis plan.	Assume responsibility for development of data analysis plan.		
	Determination of how data analysis plan will be implemented.	Obtain input or consult with district, school and other appropriate individuals or groups.	Provide district input and assistance as appropriate	Provide school input and assistance as appropriate.

Assessment Steps	Work Phases	Duties and Responsibilities		
		STATE	District	School
7. DETERMINATION OF DATA SYNTHESIS AND PRESENTATION PROCEDURES	Determination of how the information will be put together (synthesized) and presented (displayed and reported).	Assume responsibility for determining data synthesis and presentation procedures.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
		Obtain input or consult with district, school and other appropriate individuals or groups.		
8. COLLECTION OF DATA	Implementation of procedures and schedule for data collection.	Assume responsibility for statewide leadership and coordination of data collection effort.		
		Work with and through district in obtaining school involvement.	Arrange for school involvement in data collection effort.	Become involved in data collection effort.
9. ANALYSIS OF DATA	Implementation of data analysis and interpretation procedures.	Compile, analyze and interpret data.		
		Obtain input or consult with district, school and other appropriate individuals or groups.	Provide district input and assistance as appropriate.	Provide school input and assistance as appropriate.
	Implementation of assessment reporting plan.	Distribute assessment report(s) to intended audiences.		

ASSESSMENT RESPONSIBILITY CHART: DISTRICT-INITIATED ASSESSMENT

Assessment Steps	Work Phases	Duties and Responsibilities		
		DISTRICT	School	State
1. DETERMINATION OF NEED FOR ASSESSMENT	Development of rationale for the assessment.	Assume responsibility for development of rationale.		
	Determination of objectives and decision requirements.	Obtain input or consult with state, school and other appropriate individuals or groups.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
2. DETERMINATION OF ASSESSMENT PARAMETERS	Identification of areas to be assessed.	Assume responsibility for determining assessment parameters.		
	Determination of target groups.	Obtain input or consult with state, school and other appropriate individuals or groups.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
	Identification of available resources in relation to assessment objectives.			
	Establishment of assessment timeline.			
3. OBTAINING DATA COLLECTION INSTRUMENTS	Determination of assessment instruments needed.	Assume responsibility for carrying out review and selection process.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
	Examination of available assessment instruments.			
	Development of appropriate assessment instruments.	Make necessary arrangements for development process. If work is to be contracted out, make contractual arrangements.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
	Establishment of developmental timeline.		Participate as testing site as needed.	

Assessment Steps	Work Phases	Duties and Responsibilities		
		DISTRICT	School	State
4. DETERMINATION OF DATA COLLECTION PROCEDURES	Development of data collection plan for existing data.	Assume responsibility for development of plans.		
	Development of plan for gathering new data: • Sampling plan and techniques to be used • Data collection administration procedures	Obtain input or consult with state, school and other appropriate individuals or groups.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
	Determination of scoring procedures.			
	Development of plan for data processing.			
5. DETERMINATION OF REPORTING REQUIREMENTS	Determination of content of assessment report(s).	Assume responsibility for determining reporting requirements.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
	Determination of who is to receive assessment report(s).			
	Determination of how the information will be reported (strategies and format).			
	Establishment of reporting timeline.			
6. DETERMINATION OF DATA ANALYSIS PROCEDURES	Development of data analysis plan.	Assume responsibility for development of data analysis plan.		
	Determination of how data analysis plan will be implemented.	Obtain input or consult with state, school and other appropriate individuals or groups.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.

Assessment Steps	Work Phases	Duties and Responsibilities		
		DISTRICT	School	State
7. DETERMINATION OF DATA SYNTHESIS AND PRESENTATION PROCEDURES	Determination of how data analysis plan will be implemented.	Assume responsibility for determining data synthesis and presentation procedures.		
	Determination of how the information will be presented (displayed) and reported).	Obtain input or consult with state, school and other appropriate individuals or groups.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
8. COLLECTION OF DATA	Implementation of procedures and schedule for data collection.	Assume responsibility for districtwide leadership and coordination of data collection effort.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.
9. ANALYSIS OF DATA	Implementation of data analysis and interpretation procedures.	Assume responsibility for compiling, analyzing and interpreting data.		
	Implementation of assessment reporting plan.	Obtain input or consult with state, school and other appropriate individuals or groups. Distribute assessment report(s) to intended audiences.	Provide school input and assistance as appropriate.	Provide state input and assistance as requested by district.

ASSESSMENT RESPONSIBILITY CHART: SCHOOL-INITIATED ASSESSMENT

Assessment Steps	Work Phases	Duties and Responsibilities		
		SCHOOL	District	State
1. DETERMINATION OF NEED FOR ASSESSMENT	Development of rationale for the assesssment.	Assume responsibility for development of rationale.		
	Determination of objectives and decision requirements.	Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
2. DETERMINATION OF ASSESSMENT PARAMETERS	Identification of areas to be assessed.	Assume responsibility for determining assessment parameters.		
	Determination of target groups.	Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
	Identification of available resources in relation to assessment objectives.			
	Establishment of assessment timeline.			
3. OBTAINING DATA COLLECTION INSTRUMENTS	Determination of assessment instruments needed.	Carry out review and selection process.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
	Examination of available assessment instruments.			
	Development of appropriate assessment instruments.	Make necessary arrangements for development process. Arrange for district and state assistance as needed.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
	Establishment of assessment timeline.			

Assessment Steps	Work Phases	Duties and Responsibilities		
		SCHOOL	District	State
4. DETERMINATION OF DATA COLLECTION PROCEDURES	Development of data collection plan for existing data.	Assume responsibility for development of plans.		
	Development of plan for gathering new data: • Sampling plan and techniques to be used. • Data collection administration procedures.	Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
	Determination of scoring procedures.			
	Development of plan for data processing.			
5. DETERMINATION OF REPORTING REQUIREMENTS	Determination of content of assessment report(s).	Assume responsibility for determining reporting requirements.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
	Determination of who is to receive assessment report(s).			
	Determination of how the information will be reported (strategies and format).			
	Establishment of reporting timeline.			
6. DETERMINATION OF DATA ANALYSIS PROCEDURES	Development of data analysis plan.	Assume responsibility for development of analysis plan.		
	Determination of how data analysis plan will be implemented.	Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.

Assessment Steps	Work Phases	Duties and Responsibilities		
		SCHOOL	District	State
7. DETERMINATION OF DATA SYNTHESIS AND PRESENTATION PROCEDURES	Determination of how the information will be put together (synthesized) and presented (displayed and reported).	Assume responsibility for determining data synthesis and presentation procedures.		
		Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
8. COLLECTION OF DATA	Implementation of procedures and schedule for data collection.	Assume responsibility for school leadership and coordination of data collection effort.	Proved district input and assistance as requested by school.	Provide state input and assistance as requested by district.
9. ANALYSIS OF DATA	Implementation of data analysis and interpretation procedures.	Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
		Compile, analyze and interpret data.		
		Obtain input or consult with district, state and other appropriate individuals or groups.	Provide district input and assistance as requested by school.	Provide state input and assistance as requested by district.
		Distribute assessment report(s) to intended audiences.		

APPENDIX

APPENDIX A. RESOURCES ON ASSESSMENT

At the State and District levels, there are staff members who are able to provide technical assistance to schools on assessment. These include staff from the Test Development and Administration Section and the Evaluation Section in the State Office, and the testing coordinators in the District Offices. In addition, there are faculty members at the institutions of higher learning who may serve as resource persons to schools, districts, and the State Office in conducting an assessment. Schools needing State assistance on assessment should work through their District Offices.

In addition to resource personnel, numerous publications on assessment are also available. A brief listing of some of these publications follows. This listing can serve only as a general guide to the user who wishes to know more about assessment or to increase skill in this area. Each publication is annotated briefly to describe its major content. For the convenience of the user, a summary form is also provided at the end which relates each publication on the listing to major elements and purposes of assessment.

Selected Publications on Assessment

A Compendium of Assessment Techniques, Joan Knapp and Amiel Sharon, Cooperative Assessment of Experiental Learning (CAEL), Educational Testing Service, Princeton, New Jersey, 1975. 50 pages.

This brief handbook provides an introduction to techniques that can be used to assess student learning "by doing"—the kind of learning that takes place when an individual participates in a variety of social, artistic, political, work, or cross-cultural activities off the campus. Although the CAEL project which developed the compendium focused on higher education, the techniques described are appropriate at the lower education level as well.

The publication provides a relatively brief discussion of a number of assessment techniques, with sufficient detail to allow the user to determine whether a particular technique might be applicable to his or her own situation. Although not a procedural manual showing how to develop and administer assessment techniques, it does provide sufficient information and references for the reader who wants to know more about a particular technique. The techniques described include: performance tests, simulations, assessment centers, essay, examinations, objective written examinations, interviews, self-assessment ratings, and product assessment.

A Look at the Mosaic of Educational Evaluation and Accountability, Blaine R. Worthen, NWREL, 1974. 38 pages.

This short, non-technical monograph is a general introduction to the subject of evaluation, including accountability and assessment. Basic definitions and brief discussions of concepts such as the following are provided: measurement, assessment, evaluation, accountability, research, evaluation for decision-making, formative and summative evaluation, internal and external evaluation (and possible combinations), goal-directed and goal-free evaluation, and comparative and non-comparative evaluation.

In addition, experts with differing points-of-view on evaluation are quoted, and the characteristics of good evaluation are described.

Copies of this monograph have been distributed widely in the Department. An additional copy may be obtained from the Evaluation Section, Office of the Superintendent.

About Learning Materials, M. Frances Klein, ASCD, 1701 K Street, N.W., Washington, D. C. 1978. 45 pages.

This handbook provides a comprehensive guide with implications for many facets of decision-making as related to the selection of instructional materials and instructional improvement.

Hi-lites of this handbook are the listing of resources for evaluating instructional materials, the discussion of problems associated with developing and evaluating instructional materials, and the materials in the appendix prepared by Richard I. Miller entitled, "Selecting New Aids to Teaching." This material provides specific and realistic guides to assist schools in making better decisions about instructional units.

Evaluating Instructional Programs, Bruce Wayne Tuckman, Allyn and Bacon, Inc., 1979. 309 pages.

This book provides all the tools necessary to evaluate school-based instructional programs. It outlines the basic evaluation components—outcomes, inputs, processes, and design—in operational terms including instructions on how to write objectives, how to select or design measuring instruments, how to record findings, and how to design comparisons. It also describes operational procedures for conducting three types of evaluation—formative, summative, and ex post facto—as well as how to avoid the pitfalls of conducting evaluations. Included are four case studies that are actual evaluation reports that illustrate the various approaches covered in the book.

Evaluator's Handbook, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills, 1978. 133 pages.

This handbook is part of the **Program Evaluation Kit,** a set of books intended to assist people who are conducting evaluations of educational programs. The introduction contained in Chapter 1 calls attention to the critical issues surrounding program evaluation. Chapter 2, entitled "How to Play the Role of Formative Evaluator," describes the diversified job of the formative evaluator who enters into a helping relationship with a

program's staff. Chapters 3, 4, and 5 contain step-by-step guides for organizing and accomplishing three types of evaluations:

- A formative evaluation during program installation and development;
- A standard summative evaluation based on measurement of achievement, attitudes, and/or program implementation;
- A small experiment, a procedure of interest to a user who wishes to conduct pilot tests or to evaluate a program aimed toward a few measureable objectives.

How to Design a Program Evaluation, Carol Taylor Fitz-Gibbon and Lynn Lyons Morris, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills, 1979. 164 pages.

The objective of this book is to acquaint the user with ways in which evaluation results can be made more credible: Choosing a design which prescribes when and from whom data will be gathered, putting it into operation, and analyzing and reporting the data gathered. The underlying premise of the book is that attention to design is important.

Chapter 1 discusses the distinctions between formative and summative evaluations, with focus on the special problem areas of compensatory and special education programs. Chapter 2 discusses design elements in program evaluation and anticipated problems such as control groups.

Chapters 3 through 6 outline six kinds of designs, including control group designs, time series designs, and before-and-after designs. Chapter 7 discusses analysis of variances, and Chapter 8 provides practical suggestions on how to randomize.

How to Measure Achievement, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., 1978. 159 pages.

The purpose of this book is to help the user evaluate how well a program has met achievement objectives. It provides suggestions, procedures, and rules of thumb for performing evaluation tasks related to measuring achievement for program evaluation and introduces some of the theory underlying the procedures for developing and selecting achievement tests and interpreting their results.

Each of the book's six chapters provides practical advice on one area of measurement of achievement. The list of opening questions in Chapter 1 helps the user to decide what to measure and how much time and effort to invest in measuring achievement. The chapter, as well as the whole book, deals with achievement tests.

The topic of Chapters 2 and 3 is selecting and obtaining published tests. Chapter 2 describes the types of achievement test data that might already be available in schools and discusses ways in which they might be useful in an evaluation. Also provided is a list of sources of published tests that may be purchased or borrowed.

To assist in estimating test appropriateness, Chapter 3 presents a table and procedures for comparing a test with a program's most important objectives.

Should the user wish to construct a test, Chapter 4 provides a guide to resources for custom-designing a test. It references **How To** guides on test construction and item writing. In addition, it contains an annotated list of test item and objectives banks in various subject-matter areas, and a list of testing services on test designing and scoring.

Chapters 5 and 6 deal with technical quality and use of tests. Chapter 5 discusses reliability and validity issues in achievement testing. Chapter 6 contains a short discussion of test interpretation and score reporting.

How to Measure Attitudes, Marlene E. Henerson, Lynn Lyons Morris, and Carol Taylor Fitz-Gibbon, Center for the study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills, 1978. 179 pages.

This book is intended to help users develop basic skills in designing and using instruments for the measurement of affective objectives or attitudes. Whenever possible, the book recommends procedures, rules of thumb, and practical strategies for performing both formative and summative evaluation tasks related to the assessment of people's attitudes. Included are suggestions for summarizing, analyzing, and displaying data and a listing of names and addresses of publishers of attitude measures.

How to Measure Program Implementation, Lynn Lyons Morris, Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., 1978. 140 pages.

The overall intent of this book is to help the user develop skills in describing program implementation and in designing and using appropriate measurement instruments to back up the description of a program's implementation.

Three major purposes are reflected in the organization of the book:

1. To list program features and activities attended to and described in a progam implementation report.
2. To help decide how much effort to spend on describing program implementation.
3. To guide the designing of instruments to produce adequate backup data.

Chapter 1 discusses the reasons for examining a program's implementation. Chapter 2 provides an outline for the implementation section of an evaluation report. With this outline as a guide, the user can produce a detailed description of the program based on the answers to the probes accompanying each heading.

Chapters 3 through 7 comprise the "How to Measure" section of the book. Chapters 3, 4, 5, and 6 describe methods of measurement -- examination of records, observations, interviews, questionnaires. Chapter 7 discusses validity and reliability, factors reflecting the quality of the measures.

How to Present an Evaluation Report, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills 1978. 80 pages.

The purpose of this book is to provide guidelines for effectively conveying evaluation information to various audiences. The book contains prescriptions and helpful hints for formal and informal reporting, either written or oral.

How to Present an Evaluation Report has three sections. Chapter 1 is devoted to organizing ideas. Chapter 2 presents a standard outline for an evaluation report. This outline is intended to be exhaustive of the types of information that can be conveyed to

various audiences. This outline can be followed by the user to the letter, or the user can simply use it to become familiar with the set of topics that should be discussed in an evaluation report.

Chapter 3 provides assistance in organizing reporting methods for maximum impact. Consisting of a list of topics, Chapter 3 is a compendium of communication pointers. It includes advice on choosing what information to present to various audiences and pointers on good writing and effective verbal presentations.

Chapter 4 describes data presentation methods, including tables, graphs and charts. Relying heavily on examples, it contains prototypes of graphs and charts for displaying attitude, achievement, and program implementation data. To assist with oral presentations, the chapter presents a step-by-step procedure for preparing audiences to read and interpret graphs.

Middle School/Junior High School Evaluative Criteria, A Guide for School Improvement, Donald C. ManLove, Lyle Mowrey, National Study of School Evaluation, 2201 Wilson Boulevard, Arlington, Virginia, 1979. (Also available for the elementary level).

This manual provides guidelines for conducting self-evaluation by individual middle/junior high schools and evaluation by a visiting committee. The manual is comprised of 12 sections. The section on "School and Community" together with the section on "Philosophy and Goals" and the section on "Major Educational Priorities" form the foundation for the school self-study process and undergirds the entire evaluation. The next two sections "Design of Curriculum" and "Learning Areas" are closely related since all include aspects of the formal education program. Section V, on design, focuses on the organization of the curriculum, and Section VI is intended for use in all areas of instruction the school identifies. Section VII covers the individual faculty data and SectionVIII gives attention to the administration, instructional staff, and auxiliary staff. Section IX, "Student Personnel Services," includes such services to students as guidance, health, special education, food, and transportation. The final section deals with the school plant and facilities.

Worksheets are provided for each section.

Planning a Program Evaluation, An Educator's Handbook, John J. Bowers, Research for Better Schools, Inc., 1700 Market Street, Philadelphia, Pennsylvania, 1978.

The handbook is intended to help schools plan their curriculum program evaluations. Its focus is on evaluation planning, rather than details of executing the plan.

The planning process consists of five steps. The first step is to clarify the questions and concerns that led to the decision to plan the program evaluation. The second step is to summarize basic facts about the program to be evaluated. The third step begins by identifying program elements which are considered to be relevant to the concerns and questions listed in step one and classifying these program elements into categories reflecting student outcomes, curriculum content, content sequence, instructional approach, and program support. The fourth step consists of determining the relative importance of each relevant program element and selecting the most important ones for further attention. The fifth step consists of specifying data collection requirements for each retained element and developing judgement criteria for interpreting the data to be collected.

Work forms are provided for each of these steps.

The Planning Book for Needs Assessment, Karilee Watson, Iowa State University Research Foundation, Inc., 1978. 44 pages.

This publication on needs assessment was developed for the state of Iowa for administrators and teachers. The focus is the instructional program and the implementation of the needs assessment goals in that program. The material is organized into three sections: Goals (Part I); Status and Analysis (Part II); and Implementation and Evaluation (Part III).

Problems and Potentials of Applied Performance Testing, James R. Sanders and Thomas P. Sachese, Clearinghouse for Applied Performance Testing NWREL, December 1975. 159 pages.

This work reports on the National Conference on the Future of Applied Performance Testing. It includes addresses and reports of group discussions. Of especial value are the guidelines for the evaluation of applied performance test materials and procedures contained in the Appendix.

Program Evaluation Skills for Busy Administrators, Thomas R. Owens and Warren D. Evans, NWREL, 1977. 63 pages.

This manual gives a concise introduction to program evaluation for educational administrators. While the focus is on the busy school administrator, the manual is useful to educators at all levels of responsibility, especially individuals and groups preparing for systematic assessment and evaluation.

Included in the manual are non-technical discussions on aspects of evaluation, rationales, formats, and rating forms for planning and executing assessments and program evaluations. Major topics consist of purposes of evaluation, describing a program or activity to be evaluated, establishing evaluation guidelines, preparing an evaluation plan, implementing the evaluation, and reporting findings.

Copies of this manual have been distributed widely in the Department. An additional copy may be obtained from the Evaluation Section, Office of the Superintendent.

Summary of Publications on Assessment

Publications	Assessment Elements				General Purposes				
	Identifying Needs	Collecting Information	Analyzing	Reporting	Accreditation	Needs Assessment	Review of Program Design & Implementation	Selection of Instructional Materials	Student Achievement
A COMPENDIUM OF ASSESSMENT TECHNIQUES, Joan Knapp and Amiel Sharon, Cooperative Assessment of Experiential Learning (CAEL), Educational Testing Service, Princeton, New Jersey, 1975.		X							X
A LOOK AT THE MOSAIC OF EDUCATIONAL EVALUATION AND ACCOUNTABILITY, Blaine R. Worthen, NWREL, 1974.	X	X		X			X		
ABOUT LEARNING MATERIALS, M. Frances Klein, ASCD, 1701 K Street, N.W., Washington, D.C., 1978.		X	X					X	
EVALUATING INSTRUCTIONAL PROGRAMS, Bruce Wayne Tuckman, Allyn and Bacon, Inc., 1979.		X	X	X			X		
EVALUATOR'S HANDBOOK, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills, 1978.	X	X	X	X		X	X		X
HOW TO MEASURE ACHIEVEMENT, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., 1978.		X	X	X			X		X
HOW TO MEASURE ATTITUDES, Marlene E. Henerson, Lynn Lyons Morris, and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, UCLA, Sage Publications, Inc., Beverly Hills, 1978.		X	X	X					X
HOW TO MEASURE PROGRAM IMPLEMENTATION, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, Sage Publications, Inc., 1978.		X	X	X			X		X

	Assessment Elements				General Purposes				
	Identifying Needs	Collecting Information	Analyzing	Reporting	Accreditation	Needs Assessment	Review of Program Design & Implementation	Selection of Instructional Materials	Student Achievement
HOW TO PRESENT AN EVALUATION REPORT, Lynn Lyons Morris and Carol Taylor Fitz-Gibbon, Center for the Study of Evaluation, Sage Publications, Inc., Beverly Hills, 1978.				X					
MIDDLE SCHOOL/JUNIOR HIGH SCHOOL EVALUATIVE CRITERIA, A GUIDE FOR SCHOOL IMPROVEMENT, Donald C. ManLove, et al. National Study of School Evaluation, Virginia, 1979. (also for Elementary and High School)	X	X			X		X		
PLANNING A PROGRAM EVALUATION, AN EDUCATOR'S HANDBOOK, John J. Bowers, Research for Better Schools, Inc., 1700 Market Street, Phladelphia, Pennsylvania, 1978.	X	X	X				X		
THE PLANNING BOOK FOR NEEDS ASSESSMENT, Karilee Watson, Iowa State University Research Foundation, Inc., 1978.	X	X	X	X		X			
PROBLEMS AND POTENTIALS FOR APPLIED PERFORMANCE TESTING, Clearinghouse for Applied Performance Testing, NWREL, December 1975.		X							
PROGRAM EVALUATION SKILLS FOR BUSY ADMINISTRATORS, Thomas R. Owens and Warren D. Evans, NWREL, 1977.	X	X		X			X		